

EDITOR'S NOTE

In an editor's note the author has to be precise and convincing, especially when writing for a review such as the Academic Journal of Manufacturing Engineering.

I must admit that, as I am writing this, I do not feel at all characterized by either of the above. My confusion arises from a few discussions regarding the future of what Manufacturing Engineering should be, especially the branch of Equipment and Machine Construction. In recent years, several dominant concepts related to the future of Manufacturing Engineering arouse: Industry 4.0, Future Factory, Digital Factory, Blue Economy etc.

Glancing at the recent issues of the prestigious review *Scientific American*, I realize that the objectives of research worldwide are quite diverse: IT, Astronomy, Physics, Biology, Medicine, Genetics etc., yet almost nothing which might be of interest for Manufacturing Engineering, specific for Equipment and Machine Construction. I have the feeling that, if I am not involved in the manufacturing of automobiles, airplanes and household appliances, for which the above-mentioned concepts fit perfectly, I should be ashamed of being an engineer in this field, which seems to be no longer of scientific interest. Thankfully there is the concept of "Blue Economy", which set as its objective the use of resources in a "cascade"-like system. That is, the waste resulted from the consumption of a certain product or from it being obsolete, becomes raw material in a possible global economic system, and can be transformed into solution of sustainable development through innovation. On the other hand, beside the mass-production industries, there are domains which manufacture a series of unique and special products, with specific purpose.

My confusion is caused by the existence on the marketplace of a wide field of knowledge, from manufacturing on large universal machine tools of unique products or products manufactured in small quantities, to Industry 4.0 or Future Factory. The entire field needs research, manufacturing unique products or limited series requires a certain approach of the R&D, completely different from the research required for mass production. Mass production has always been the engine of economies, yet it will have a different orientation of research, maybe a super-futuristic one. When

producing unique products or limited series, conceptualization is completely different, both in terms of the structure of the product, and especially in terms of the technological approach. I am still confused. Personally, I think both directions must be supported. Whatever is built or manufactured, it needs to be machined and it also requires certain equipment. These machines and equipment must be manufactured, no matter if we refer to limited series or unique products. Consequently, research should be oriented in a different manner.

The Academic Journal of Manufacturing Engineering must promote both of them.

I must admit that ITC ensures the proper environment for achieving excellence in Manufacturing Engineering, but let us not forget that processes, even if some of them are still classical, deserve to be studied and researched, especially in order to ensure the objectives of quality and efficiency.

In such a context, the academics from the North University Centre of Baia Mare, as part of the Technical University of Cluj-Napoca, celebrates 25 years of technical higher education in Machine Manufacturing Technology and Equipment for Industrial Processes. Some days ago, the first cohort of graduates of this two study programs celebrated 20 years since graduation. In the context of the engineer from 1995, 50% of them left Romania and are currently living and working abroad. From the other half, very few are active professionals in the field of engineering. This was the best trained generation, professionally speaking ... and not according to the "Bologna" system criteria!

Some days ago I was called by some managers of industrial companies from Maramures; they were looking for experienced engineers, aged 40 to 45. I replied that such engineers are either relocated abroad or they changed their profession. They had no chance to gain experience, because in 1995 engineers were no longer needed.

These past days I was also called by other managers who requested well-prepared young graduates in these two domains. Doing the math, I realized that currently the number of graduates is too small to satisfy the demand.

I think we already face a problem! A new stage in technological development is beginning! And let us not forget that we are talking about engineers, who

should be able to deal with both mass-production and one-off production.

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